```
(FILE 'HOME' ENTERED AT 18:11:00 ON 18 MAY 2004)

        FILE 'MEDLINE, BIOTECHDS, EMBASE, BIOSIS, SCISEARCH, CANCERLIT, CAPLUS'
        ENTERED AT 18:11:09 ON 18 MAY 2004
L1          2385 S CHRISTIANS F?/AU OR COLE K?/AU
L2           306 S RIBOSOME DISPLAY
L3        337413 S ARRAY OR MICROARRY OR PROBE ARRAY OR CHIP OR BIOCHIP
L4            14 S L2 AND L3
L5             0 S L1 AND L2
L6            47 S L1 AND L3
L7            16 S L6 AND (POLYPEPTIDE OR PROTEIN OR PEPTIDE)
L8            12 S L4 AND (PROTEIN OR POLYPEPTIDE OR PEPTIDE)
L9             8 DUP REM L7 (8 DUPLICATES REMOVED)
L10           10 DUP REM L8 (2 DUPLICATES REMOVED)
L11           24 S L2 AND (PROB## OR OLIGONUCLEOTID## OR OLIGO#)
L12            5 S L11 AND (ARRAY OR MICROARRAY OR SOLID SUPPORT OR CHIP OR BIOC
L13            5 DUP REM L12 (0 DUPLICATES REMOVED)
L14           19 DUP REM L11 (5 DUPLICATES REMOVED)
L15           18 S  L2 AND (NUCLEIC ACID TAG OR TAG?)
L16            8 DUP REM L15 (10 DUPLICATES REMOVED)

=>
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# WEST Search History

DATE: Tuesday, May 18, 2004

| Hide? | Set Name | Query | Hit Count |
|---|---|---|---|
| | | *DB=PGPB,USPT,USOC,EPAB,DWPI; PLUR=YES; OP=ADJ* | |
| ☐ | L1 | Baskerville-D$.in. and ribosome display | 0 |
| ☐ | L2 | Baskerville-D$.in. | 8 |
| ☐ | L3 | ribosome display | 250 |
| ☐ | L4 | L2 and l3 | 0 |
| ☐ | L5 | array or microarray or probe array | 622709 |
| ☐ | L6 | l3 and l5 | 152 |
| ☐ | L7 | l3 same l5 | 26 |
| ☐ | L8 | l6 and (screen$ near (polypeptide or protein)) | 81 |
| ☐ | L9 | L8 and tag$ | 76 |
| ☐ | L10 | L9 and (binding affinity) | 62 |
| ☐ | L11 | L10 and (drug near candidate) | 31 |
| ☐ | L12 | l9 and ((different or plurality) near (oligonucleotide or probe)) | 10 |
| ☐ | L13 | l8 and ((different or plurality) near (oligonucleotide or probe)) | 10 |
| ☐ | L14 | l6 and ((different or plurality) near (oligonucleotide or probe)) | 19 |
| ☐ | L15 | l3 and ((different or plurality) near (oligonucleotide or probe)) | 24 |
| ☐ | L16 | christians-F$.in. or cole-K$.in. | 104 |
| ☐ | L17 | ribosome display | 250 |
| ☐ | L18 | (tagged polypcptide) or (polypeptide near tag$) | 2659 |
| ☐ | L19 | L18 and L17 | 19 |
| ☐ | L20 | L19 and (nucleic acid tag or DNA tag or oligo$ tag or polynucleotide tag) | 10 |
| ☐ | L21 | L20 and (array or microarray) | 10 |
| ☐ | L22 | polynucleotide tag$ or oligonucleotide tag$ or nucleic acid tag$ or oligo$ tag$ or DNA tag$ | 496 |
| ☐ | L23 | L22 and L17 | 18 |
| ☐ | L24 | L23 and (array or microarray) | 16 |
| ☐ | L25 | L16 and ribosome display | 1 |
| ☐ | L26 | L16 and L18 | 2 |
| ☐ | L27 | L26 | 2 |

END OF SEARCH HISTORY

First Hit

L7: Entry 12 of 26                    File: PGPB              Jul 31, 2003


DOCUMENT-IDENTIFIER: US 20030143616 A1
TITLE: Addressable protein arrays


Summary of Invention Paragraph:
[0010] In another related aspect, the invention features a solid support including
an array of immobilized capture probes; each of the capture probes includes a non-
nucleosidic spacer group and an oligonucleotide sequence to which a ribosome
display particle is bound (for example, hybridized or covalently bound).

Detail Description Paragraph:
[0052] Ordered, addressable arrays of peptide fragments can also be prepared. To
prepare these arrays, the fusion library is generated from short synthetic DNA
sequences or fragments of cDNAs or genomic DNAs. In another variation, ribosome
display particles, such as those described in Gold et al., WO 93/03172, can be
hybridized to the solid support to generate the protein array. Again, these
particles are immobilized on the solid support through a hybridization reaction
between the capture oligo and the protein-coding RNA.

CLAIMS:

25. A solid support comprising an array of immobilized capture probes, each of said
capture probes comprising a non-nucleosidic spacer group and an oligonucleotide
sequence to which a ribosome display particle is bound.

☐ | Generate Collection | Print


L7: Entry 22 of 26                    File: USPT                    Mar 25, 2003


DOCUMENT-IDENTIFIER: US 6537749 B2
TITLE: Addressable protein arrays


Brief Summary Text (11):
In another related aspect, the invention features a solid support including an
array of immobilized capture probes; each of the capture probes includes a non-
nucleosidic spacer group and an oligonucleotide sequence to which a ribosome
display particle is bound (for example, hybridized or covalently bound).

Detailed Description Text (22):
Ordered, addressable arrays of peptide fragments can also be prepared. To prepare
these arrays, the fusion library is generated from short synthetic DNA sequences or
fragments of cDNAs or genomic DNAs. In another variation, ribosome display
particles, such as those described in Gold et al., WO 93/03172, can be hybridized
to the solid support to generate the protein array. Again, these particles are
immobilized on the solid support through a hybridization reaction between the
capture oligo and the protein-coding RNA.

# Hit List

## Search Results - Record(s) 1 through 10 of 10 returned.

☐ 1. Document ID: US 20040071705 A1

**Using default format because multiple data bases are involved.**

```
L13: Entry 1 of 10                          File: PGPB              Apr 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040071705
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040071705 A1


TITLE: Serum protein-associated target-specific ligands and identification method
therefor

PUBLICATION-DATE: April 15, 2004


INVENTOR-INFORMATION:
NAME                     CITY              STATE      COUNTRY      RULE-47
Sato, Aaron K.           Somerville        MA         US
Edge, Albert             Newton            MA         US


US-CL-CURRENT: 424/145.1; 435/7.1
```

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 2. Document ID: US 20040048311 A1

```
L13: Entry 2 of 10                          File: PGPB              Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040048311
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040048311 A1


TITLE: Use of collections of binding sites for sample profiling and other
applications

PUBLICATION-DATE: March 11, 2004


INVENTOR-INFORMATION:
NAME                     CITY              STATE      COUNTRY      RULE-47
Ault-Riche, Dana         Los Gatos         CA         US
Kassner, Paul D.         San Mateo         CA         US
```

US-CL-CURRENT: 435/7.1; 436/518

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

☐  3.   Document ID: US 20040043384 A1

L13: Entry 3 of 10                          File: PGPB                    Mar 4, 2004

PGPUB-DOCUMENT-NUMBER: 20040043384
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040043384 A1

TITLE: In vitro protein translation microarray device

PUBLICATION-DATE: March 4, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY | RULE-47 |
|------|------|-------|---------|---------|
| Oleinikov, Andrew V. | Mill Creek | WA | US | |

US-CL-CURRENT: 435/6; 435/287.2, 435/69.1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

☐  4.   Document ID: US 20040005709 A1

L13: Entry 4 of 10                          File: PGPB                    Jan 8, 2004

PGPUB-DOCUMENT-NUMBER: 20040005709
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040005709 A1

TITLE: Hybridization control of sequence variation

PUBLICATION-DATE: January 8, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY | RULE-47 |
|------|------|-------|---------|---------|
| Hoogenboom, Henricus Renerus Jacobus Mattheus | Maastricht | | NL | |
| Somers, Veerle | Sint-Truiden | | BE | |

US-CL-CURRENT: 435/455; 435/320.1, 435/91.2

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

☐  5.   Document ID: US 20030219752 A1

L13: Entry 5 of 10                          File: PGPB                    Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030219752

```
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030219752 A1
```

TITLE: Novel antigen binding molecules for therapeutic, diagnostic, prophylactic, enzymatic, industrial, and agricultural applications, and methods for generating and screening thereof

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY | RULE-47 |
|------|------|-------|---------|---------|
| Short, Jay M. | Rancho Santa Fe | CA | US | |

US-CL-CURRENT: 435/6; 435/320.1, 435/325, 435/326, 435/69.1, 435/7.1, 530/387.1, 536/23.1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

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☐ 6. Document ID: US 20030143681 A1

L13: Entry 6 of 10                     File: PGPB                    Jul 31, 2003

```
PGPUB-DOCUMENT-NUMBER: 20030143681
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030143681 A1
```

TITLE: Human ataxin-1-like polypeptide IMX97018

PUBLICATION-DATE: July 31, 2003

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY | RULE-47 |
|------|------|-------|---------|---------|
| Anderson, Dirk M. | Seattle | WA | US | |

US-CL-CURRENT: 435/69.1; 435/199, 435/254.2, 435/320.1, 435/325, 435/6, 536/23.2

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

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☐ 7. Document ID: US 20030143612 A1

L13: Entry 7 of 10                     File: PGPB                    Jul 31, 2003

```
PGPUB-DOCUMENT-NUMBER: 20030143612
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030143612 A1
```

TITLE: Collections of binding proteins and tags and uses thereof for nested sorting and high throughput screening

PUBLICATION-DATE: July 31, 2003

INVENTOR-INFORMATION:
```
NAME                        CITY          STATE    COUNTRY      RULE-47
Ault-Riche, Dana            Palo Alto     CA       US
Kassner, Paul D.            San Mateo     CA       US
```

US-CL-CURRENT: 435/6; 435/7.1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De |

☐    8.    Document ID: US 20030130827 A1

L13: Entry 8 of 10          File: PGPB          Jul 10, 2003

PGPUB-DOCUMENT-NUMBER: 20030130827
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030130827 A1

TITLE: Protein design automation for protein libraries

PUBLICATION-DATE: July 10, 2003

INVENTOR-INFORMATION:
```
NAME                        CITY            STATE    COUNTRY      RULE-47
Bentzien, Joerg             White Plains    NY       US
Dahiyat, Bassil I.          Altadena        CA       US
Desjarlais, John R.         Pasadena        CA       US
Hayes, Robert J.            Pasadena        CA       US
Vielmetter, Jost            Altadena        CA       US
```

US-CL-CURRENT: 703/11; 435/7.1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De |

☐    9.    Document ID: US 20030087232 A1

L13: Entry 9 of 10          File: PGPB          May 8, 2003

PGPUB-DOCUMENT-NUMBER: 20030087232
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030087232 A1

TITLE: Methods for screening polypeptides

PUBLICATION-DATE: May 8, 2003

INVENTOR-INFORMATION:
```
NAME                        CITY          STATE    COUNTRY      RULE-47
Christians, Fred            Los Altos     CA       US
Cole, Kyle B.               Palo Alto     CA       US
```

US-CL-CURRENT: 435/6; 530/322, 530/395

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De |

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☐ 10. Document ID: US 20020137053 A1

L13: Entry 10 of 10  File: PGPB  Sep 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020137053
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020137053 A1

TITLE: Collections of binding proteins and tags and uses thereof for nested sorting and high throughput screening

PUBLICATION-DATE: September 26, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY | RULE-47 |
|------|------|-------|---------|---------|
| Ault-Riche, Dana | Palo Alto | CA | US | |
| Kassner, Paul D. | San Mateo | CA | US | |

US-CL-CURRENT: 435/6; 435/287.2, 435/7.9

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De |

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| Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS |

| Term | Documents |
|------|-----------|
| DIFFERENT | 3799668 |
| DIFFERENTS | 249 |
| PLURALITY | 2938570 |
| PLURALITIES | 20280 |
| PLURALITYS | 5 |
| OLIGONUCLEOTIDE | 66476 |
| OLIGONUCLEOTIDES | 56501 |
| PROBE | 263712 |
| PROBES | 125837 |
| (8 AND ((OLIGONUCLEOTIDE OR PROBE) NEAR (DIFFERENT OR PLURALITY))).PGPB,USPT,USOC,EPAB,DWPI. | 10 |
| (L8 AND ((DIFFERENT OR PLURALITY) NEAR (OLIGONUCLEOTIDE OR PROBE))).PGPB,USPT,USOC,EPAB,DWPI. | 10 |

**Display Format:** | - | | Change Format |

<u>First Hit</u>

☐ ▓▓▓ Generate Collection ▓▓▓ │ Print│

L7: Entry 9 of 26                           File: PGPB                    Nov 6, 2003

DOCUMENT-IDENTIFIER: US 20030207265 A1
TITLE: Method of making protein arrays

<u>Detail Description Paragraph</u>:
[0028] Once the nucleic acid array has been produced, the nucleic acid array can
then be used to produce proteins under appropriate conditions. Methods used to
produce proteins from nucleic acids in vitro are known in the art and include
Roberts, R. W. and Szostak, J. W., Proc. Natl. Acad. Sci. (1997), 94(23):12297-
12302 "RNA-Peptide Fusions for the In Vitro Selection of Peptides and Proteins,"
Hanes et al., Nat. Biotechnol. (2000) 18:1287-92 "Picomolar Affinity Antibodies
from a Fully Synthetic Naive Library Selected and Evolved by Ribosome Display," and
Mattheakis et al., Proc. Natl. Acad. Sci. (1994), 91:9022-9026 "An In Vitro
Polysome Display System for Identifying Ligands from Very Large Peptide Libraries,"
each of which is hereby incorporated by reference in its entirety for all purposes.
The proteins, in turn, are immobilized to the mRNA or they can then be immobilized
to a support using methods known to those skilled in the art. Features of the
protein arrays can be determined using methods known to those skilled in the art.

<u>Detail Description Paragraph</u>:
[0166] Accordingly, ribosome display is used to create an array of proteins that
are expressed from and non-covalently attached to an array of nucleic acids as
described by Hanes et al. and Mattheakis et al.. The nucleic acids preferably are
mRNAs containing a 3' spacer encoding a C terminus spacer that is attached to the
functional protein encoded by the mRNA. The nucleic acids can be synthesized by any
of a number of techniques known in art, including standard protocols for automated
synthesis of RNA (Millipore) or enzymatic synthesis of RNA from a cloned DNA
template expressed under the control of an appropriate promoter, such as a T7
promoter that is used with a T7 RNA polymerase transcription system (Promega). The
nucleic acids are arrayed as described above in Example 1A.